



REPORT ON SOLID WASTE ENFORCEMENT ACTIVITIES RELATIVE
TO KENT COUNTY DPW AND PRIVATE LANDFILLS IN THE KENT COUNTY AREA

The following is a report in reference to allegations stipulating possible different requirements between landfills operated by Kent County and those operated by private operators and more specifically between the Kent County Plainfield Township Site and the Fenske Site.

Initially to provide an appropriate background about sanitary landfill site review, we offer the following quote contained within the documentation of the Natural Resources Commission hearing regarding the Plainfield Township Site Kent County Landfill viz:

"As the testimony of the hearing developed, it became immediately apparent that no one universally applicable landfill design exists. Each application must be viewed in light of the facts and circumstances presented."
(NRC Order - April 9, 1976)

This knowledge within the Division staff, gained through experience with landfills, has established the format for detailed sanitary landfill site review processes. Site review has developed stricter requirements for acceptability over the years since the passage of the initial Solid Waste Act in 1965. We would be remiss if we did not indicate that the interest in solid waste management problems has prevented significant progress due to lack of support by all whom should have been concerned. This support and needed interest is now being generated and has begun to be of assistance in developing the needed criteria and professional staff to do the job. We have long felt the need for significant geological involvement and only recently were able to employ the services of a geologist to employ that technology in our program efforts. The second geologist was hired six months ago and we continue to be at least six months behind in our new site evaluations with little or no time available to review existing or closed sites.

As a result of some leachate problems that have come to staff attention over the past few years, we have found it necessary to develop more elaborate parameters in site review. These parameters now include: presence of groundwater, depth to groundwater, groundwater flow direction, perched groundwater condition, piezometric groundwater level, soil types encountered, surface drainage, site ownership, isolation from stream, road access, ground cover, adjacent land ownership, flood plain involvement, previous property usage, utilization involvement, diking needs, site area and geographical location.

If a proposed sanitary landfill site cannot be accepted for licensing in its natural state, engineering modification may be developed which will allow site development as a sanitary landfill. Some of the modifications will include designs unique to the engineer doing the work. For example, one firm may decide to provide groundwater protection in a manner different from his competitor. Staff must consider its effectiveness.

One of the more obvious differences between the development of the Kent County Plainfield Township Site and the Fenske Site was the requirement of an

Environmental Impact Statement and formal contested hearing for the County proposal. Following the DNR policy, an EIS was required because of the great public interest in the proposed County site. Conversely, there was little or no public interest expressed about the Fenske Site.

When comparing geologically the proposed Plainfield Site and the Fenske Site, we find entirely different conditions. The Fenske site had 14 test borings, which indicated quantities of continuous high quality clay to provide the necessary protection to the groundwater. This, contrasted with the proposed County site where 44 initial test borings and subsequent additional borings and wells, indicated a "mixed bag" of soils and sand lenses with a groundwater table that had to be lowered to accommodate the proposed refuse trenches and provide the isolation and protection necessary to assure the prevention of contamination. The combination of various soils encountered and the potential for groundwater damage to a potable aquifer resulted in more detailed and time-consuming site investigation of groundwater conditions and soil types at the Plainfield Site.

Conversely, the surface water involvement at the Fenske Site was more of a problem than at the Plainfield Site. Fenske was required to seek approval from two county drain commissions and then to reroute an intercounty drain. This was done. The Fenske Site also was required to build a containment dike to protect the site from flooding and to secure a permit from the Water Resources Commission to build the dike and occupy the flood plain. These conditions were fulfilled.

The spring of 1976 the Grand River reached new flood levels and did break the dike at Fenske's. The dike was repaired as soon as the water receded and little solid waste escaped into the stream. The Division has been accused of being partly responsible for the dike break for staff constraints did not permit our rapid approval of design and clay to be used in its construction delayed installation to the winter months. This did prevent the construction from being done during the prime time and resulted in a compaction problem for cold weather handling of clay is not conducive to providing a good stable seal.

In actuality, the recorded problem of leachate generation and migration in previous sanitary landfills operated in Kent County by the County, the city and private enterprise most certainly exemplifies the need to upgrade the geological and hydrological guidelines that have been used in the past for the development of sanitary landfills. The leachate problem at the Kentwood Site (County operated) is a prime example of an environmental problem from a sanitary landfill. Leachate generation has been in evidence since the landfill was closed, and is certainly still being generated on the site. Containment of the leachate at the Kentwood Site may still be a problem. The soils at the Kentwood Site again presented a combination of sands, clays and a fluctuating water table which have attributed to the difficulties that have been encountered with ground and surface water control and leachate at the site.

On numerous occasions specific visits have been made by staff at the Fenske Site with other interested local groups to determine if in fact leachate was being discharged to the river. To date, this has not been substantiated and the former use of the area as a liquid and sewage sludge discharge point has been curtailed.

The requirements for all sanitary landfills in Michigan are set forth in the rules of Act 87, P.A. of 1965. The Division endeavors to insure compliance with the basic requirements throughout the State. We are hampered by the lack of State personnel to provide adequate coverage in those areas where local health departments give minimum or no service to solid waste enforcement.

The operating requirements for both landfills are the same; daily compaction and covering of the refuse. The preparation for the site operation is not the same. The Plainfield site will require installation of protective liners (clay or plastic) in most of the trenches whereas the Fenske site has in place clay soil to provide groundwater protection. The County site has some unique design developed by the engineer which also varies.

Both Fenske and the County DPW have a history of operating violations and problems at their sites. Efforts by the local health department and the Resource Recovery Division have brought about improvements by both operators. An operator's "track record" has no bearing on preventing him from developing a new site, but certainly it is going to have a bearing on the in-depth review of their proposals. The Division has reviewed both proposals completely.

Recent inspections of the Fenske site by representatives of Region III at the request of Deputy Director Tody reported findings that would be in violation of Act 87, P.A. of 1965, as amended. Items covered by the inspection were as follows:

1. South edge of landfill had material visible; viz. tires, wood, concrete, etc.
2. Refuse being dumped into water behind dike.
3. A large pile of clay and sand exists on the entire length of the west side.
4. Materials were noted at the northwest corner of the landfill.

To our knowledge, the Region III representative who made the inspection did not have a copy of the approved plan nor was he aware of any stipulations that had been included in licenses issued to the Fenske operation. This knowledge may have permitted a different evaluation of observations.

After the Region III representative's visit we did receive a verbal report from a representative of the Kent County Health Department on an inspection made a few days following the Region III visit which indicated that the Fenske operation was being carried on in a manner much superior to former operations. Staff visits during the first part of October confirmed the local health department's report indicating that changes had been made in the day-to-day operation which had brought the facility into compliance. The stockpile of clay on the site was designed partially as a dike and will be utilized to provide the final cover necessary in completing the operation. Staff feels there has been significant improvements made in this facility, and it still provides the capability to serve some of the Kent County needs during this critical period when existing facilities are operating at near capacity.

The Kent County Health Department, along with staff, will continue to monitor the Fenske operation as well as the other facilities in Kent County as we attempt to see that all facilities permitted to be used as a disposal area for solid waste will be operated and maintained to protect the environment.

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